1. Introduction and Association with the Literature

Task

In this report, I will analyze the money transfer screens of the Enpara mobile banking app. Especially I will focuse on the interaction of the users with interacitive screens while users fill out the money transfer form which includes recipient's name/surname, amount, IBAN number, transfer type and explanation fields during an EFT transaction and the result of the transaction. The goal of the task is with using interacitive screens which guide user to fill out the correct fiels with correct values, user should complete the money transfer process safely and accurately.

Problem Definition

The current interface allows users to input incorrect or incomplete information in the recipient field without any real-time validation as can be seen in figure 1. After submitting the form, altough the information that user wrote to the form is wrong or the transfer fails, the system redirects users to a success screen which is shown in figure 2 and giving them the impression that the transfer has been completed but it might not have been successful. After success screen user think that the process is finished but when there is a mistake in form fields and the transfer is not done, after some time app sending a message which indicates the money transfer is not done which is shown in figure 3. This design flaw reflects significant issues in human compter interaction because the absence of immediate feedback can lead to user frustration and financial loss. (Dix et al., 2004; Shneiderman et al., 2016).

Also there is no guidance or error documentation supported by the banking app which provides information about the problem and some steps to overcome this problem. Failure to provide clear feedback can decrease trust in the banking system and lead to negative user experiences. (Landauer, 1995).

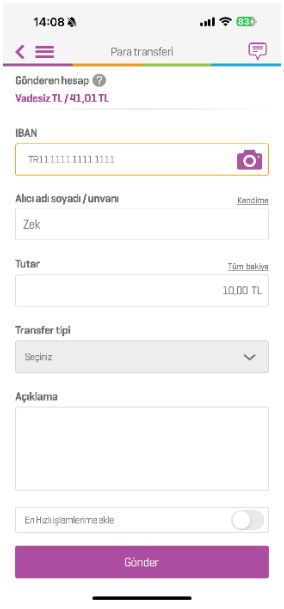

Figure 1 : Money Transfer Screen

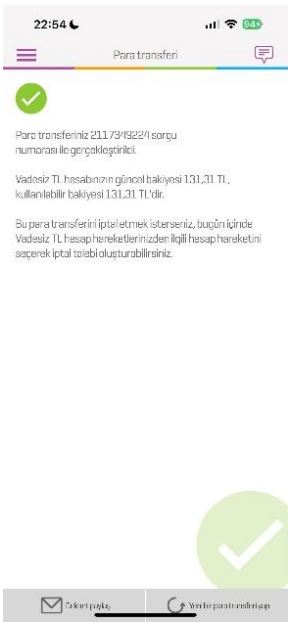

Figure 2 : Money Transfer Success Screen

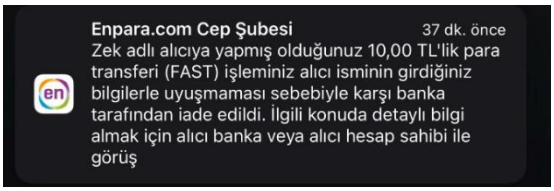

Figure 3 : Notification from Enpara App

Why is it an HCI problem?

The issues in money transfer screens of the Enpara mobile banking app is a HCI problem because there are issues affecting the usability, efficiency, satisfaction and user interaction which are the core principles of the HCI (Dix et al., 2004; Shneiderman et al., 2016). The app do not provide real time feedback and do not provide error preventation or validations which are two critical elements for a good user experience. Also this issue leads to uncertainty and cognitive dissonance becuase altough the transfer is not successful users redirects to success screen and later with the notification from the enpara app they can find out that the transfer was failed. As Norman discussed in his article, In Enpara's money transfer screens, users are lefted uncertain about the accuracy of their actions, which can erode trust in the app's reliability. (Norman, 2013).

Norman's and Schneiderman's frameworks/theories

If we analyze the enpara's money transfer screen in case of Norman's and Schneiderman's theories this screens violates some rules which are important for the user experince. As a result we could conclude that it do not provide a good user experince.

According to Shneiderman's 8 Golden Rules (Shneiderman et al., 2016):

1. **Offer Informative Feedback:** The app do not give real time messages or errors. It only send an error message at the end of the transaction when user think the money transfer is successfully done and also do not provide enough explanation to handle the problem.
2. **Prevent Errors:** System do not validate the recipient's name field in the form and do not navigate the user. By this acton system allows users to make mistakes which is a problematic and can be handled by error prevention mechanisms such as regex rules.
3. **Design Dialogs to Yield Closure:** The app provides false closure by showing a success message before the transaction has been fully validated and completed.

Norman's Seven Stages of Action (Norman, 2013):

1. **Evaluation of the Outcome:** Users cannot accurately evaluate the outcome of the transaction because the success message appears without confirming the transaction's success which is a problamatic issue for Norman. For this reason, users will not be sure about their actions and there will be uncertainity which decreases the reliability on app.
2. **Execution:** The system do not prevent incorrect execution and by that way it allows users to write incorrect or incomplete informations.

2. Recommendations, Proposed Solution

How to Eliminate the Problem:

This problem can be solved with redesigning money transfer screen and add extra screens such as error and success screens. While user entering the form fields the system has to validate those inputs and give relevant error messages. The validation process should be instant and real time so that users could easily see the wrong fields and correct them before submitting the form. If all the form fields in the money transfer screen are filled out and all the inputs are valid which do not violate the validation rules such as IBAN number is matching with the recipient's name or company title, than user could proceed to the success or fail screens. After submitting the form the user will automatically redirects to the success screen if the transaction is done successfully and will redirect to the error screen which shows the reason of the error if the transaction is not done successfully. By designing an error page user will get an explanation about the error and by clicking a button which is located in the error page user could get information about how to solve this problem. By that way, user will be sure about their actions and the system will navigate the user efficiently.

The improvements can be listed as follows.

1. **Real-Time Validation of Form Fields:** When the user types the recipient's name or company title, the system should validate this information with using bank's records. If the name does not match with the IBAN number than the system should immediately notify the user and do not allow the form to submit. By this way users will receive instant updates on their input and system will allow users to make corrections in real-time which aligns with Shneiderman's principle of offering informative feedback. (Shneiderman et al., 2016).
2. **Process Confirmation Screen:** After user clicks "gönder" button the system should redirect user to the Transaction Processing screen and after the datas are validated and the transfer is confirmed from the other bank than system has to redirect user to the success or error screen. By that system gives clear feedback to the user and prevent false closure. According to the Norman's Seven Stages of Action users need proper feedback to confirm their actions. (Norman, 2013). By this solution users will be aware of the transfer's status throughout the entire process.
3. **Error Messaging and Transparency :** The system should provide detailed error message and navigate user to solve the problem. (Shneiderman et al., 2016). We could design a error page which explains the problem and by clicking "Nasıl çözülür" button the possible solutions for the problem should appear. By that way system prevents errors and gives users more control over their actions.

Why is This Solution Better?

This solution is better because it directly addresses the fundamental issue of lack of feedback and error prevention in the current system and by following Norman's and Schneiderman's frameworks/theories it presents more interactive, user friendly, effective and certain screens. By those new screens, system will prevent user mistakes such as incorrect or incomplete

information by giving relevant error messages and navigate the user to solve the problem. The users will have more control over their actions. (Norman, 2013) As a result, users will done transactions more comfortably and can track errors and solve the problems occured with the help of the error messages given by the system.

Figma Prototype Links:

1) Success Screen:
   https://www.figma.com/design/xGF7xshmSsGdp7Iz69oq5P/Untitled?node-id=0-1&t=XKUtOdwxqfE3kLkY-1
   https://www.figma.com/proto/xGF7xshmSsGdp7Iz69oq5P/Untitled?node-id=0-1&t=XKUtOdwxqfE3kLkY-1
2) Error Screen:
   https://www.figma.com/design/xGF7xshmSsGdp7Iz69oq5P/Untitled?node-id=7-392&t=XKUtOdwxqfE3kLkY-1
   https://www.figma.com/proto/xGF7xshmSsGdp7Iz69oq5P/Untitled?node-id=7-392&t=XKUtOdwxqfE3kLkY-1
3) Transaction Process Screen :
   https://www.figma.com/design/xGF7xshmSsGdp7Iz69oq5P/Untitled?node-id=7-506&t=sB7DLq4GGODTbtby-1
   https://www.figma.com/proto/xGF7xshmSsGdp7Iz69oq5P/Untitled?node-id=7-506&t=XKUtOdwxqfE3kLkY-1
4) Money Transfer Screen :
   https://www.figma.com/design/xGF7xshmSsGdp7Iz69oq5P/Untitled?node-id=8-550&t=sB7DLq4GGODTbtby-1
   https://www.figma.com/proto/xGF7xshmSsGdp7Iz69oq5P/Untitled?node-id=8-550&t=XKUtOdwxqfE3kLkY-1

Community File Link :

https://www.figma.com/community/file/1424826372079317538

4. References and format

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Landauer, T. K. (1995). *The trouble with computers: Usefulness, usability, and productivity*. MIT Press.

Norman, D. A. (2013). *The design of everyday things* (Revised and expanded edition). Basic Books.

Shneiderman, B., Plaisant, C., Cohen, M., Jacobs, S., & Elmqvist, N. (2016). *Designing the user interface: Strategies for effective human-computer interaction* (6th ed.). Pearson.